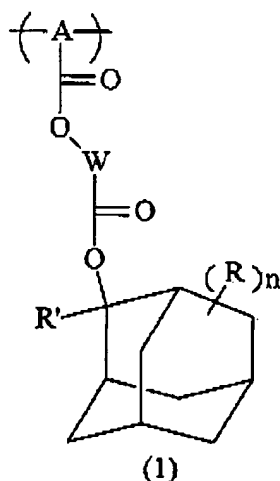


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 Filed: December 11, 2003

Customer No.: 26,289
 Attorney Docket: 2003US312

Complete set of claims

1. (currently amended) A photoresist composition comprising a photoacid generator and a polymer comprising at least one unit derived from a cyclo olefin monomer and, at least one unit as described by structure 1,



where, A has the structure



where R_1' , R_1'' and R_1''' are independently hydrogen, (C_1-C_6) alkyl or cyano, and Y is X, $C(O)OX$, OX , where X is an aliphatic (C_1-C_6) alkylene group, and m is 0 or 1,

W is a (C_1-C_8) linear or branched alkylene group,

R is independently selected from substituted hydrocarbyl group, unsubstituted hydrocarbyl group, hydrogen, hydroxyl, and (C_1-C_{10}) alkyl,

R' is hydrogen or (C_1-C_6) alkyl, and $n=1-9$.

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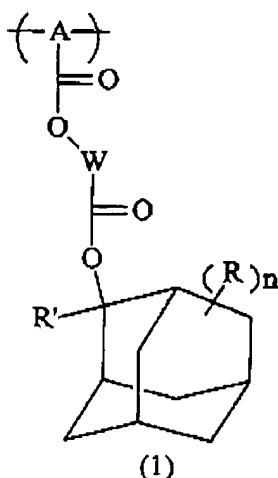
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2. (canceled)
3. (canceled)
4. (canceled)
5. (canceled)
6. (canceled)
7. (canceled)
8. (original) The composition according to claim 1, where the polymer further comprises at least one comonomeric unit.
9. (currently amended) The composition according to claim 8, where the comonomeric unit is derived from monomers selected from cyclic anhydrides, (meth)acrylate esters, and vinyl acetals ~~and cyclic olefins~~.
10. (original) The process of imaging a positive photoresist composition comprising the steps of:
 - a) coating a substrate with a film of photoresist composition of claim 1;
 - b) baking the substrate to substantially remove the solvent;
 - c) imagewise irradiating the photoresist film;
 - d) baking the photoresist film; and,
 - e) developing the irradiated photoresist film using an alkali developer.

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11. (original) The photoresist composition according to claim 10, further comprising coating an antireflective film on the substrate prior to coating the photoresist.
12. (previously presented) The photoresist composition according to claim 11, further where the antireflective coating is sensitive at 193nm.
13. (original) The process of claim 10, wherein the photoresist film is imagewise irradiated with light of wavelength in the range of 100nm to 300nm.
14. (original) The process of claim 10, wherein the heating in step d) ranges from a temperature of from about 90°C to about 150°C for from about 30 seconds to about 180 seconds on a hot plate.
15. (original) The process of claim 10, wherein the alkali developer comprises an aqueous solution of tetramethyl ammonium hydroxide.
16. (currently amended) A polymer comprising at least one unit derived from a cyclo olefin monomer and, at least one unit as described by structure 1,



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where, A has the structure



where R_1' , R_1'' and R_1''' are independently hydrogen, (C_1-C_6) alkyl or cyano, and Y is X , $C(O)OX$, OX , where X is an aliphatic (C_1-C_6) alkylene group, and m is 0 or 1,

W is a (C_1-C_8) linear or branched alkylene group,

R is independently selected from substituted hydrocarbyl group, unsubstituted hydrocarbyl group, hydrogen, hydroxyl, and (C_1-C_{10}) alkyl,

R' is hydrogen or (C_1-C_6) alkyl, and $n=1-9$.

17 (canceled).

18. (previously presented) The composition of claim 1 where W is selected from methylene, methyl methylene, dimethyl methylene, isopropylene and propylene.

19 (previously presented) The composition of claim 1 where W is CH_2 .

20. (previously presented) The composition of claim 16, where W is selected from methylene, methyl methylene, dimethyl methylene, isopropylene and propylene.

21. (previously presented) The composition of claim 16 where W is CH_2 .

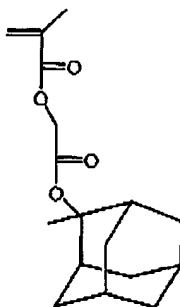
22. (canceled) The composition of claim 17, where W is selected from methylene, methyl methylene group, dimethyl methylene, isopropylene and propylene.

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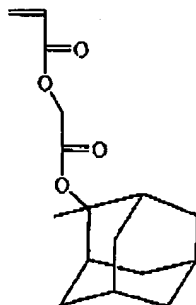
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23. (canceled)

24. (previously presented) The composition of claim 1, where the unit of structure 1 is derived from a monomer of the structure:



25. (previously presented) The composition of claim 1, where the unit of structure 1 is derived from a monomer of the structure:



26.(new) The composition of claim 1, where the cyclo olefin is a norbornene derivative.

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27.(new) The composition of claim 1, where the cyclo olefin monomer is selected from t-butyl norbornene carboxylate (BNC), hydroxyethyl norbornene carboxylate (HNC), norbornene carboxylic acid(NC), t-butyl tetracyclo[4.4.0.1.^{2,6}1. ^{7,10}] dodec-8-ene-3-carboxylate, and t-butoxycarbonylmethyl tetracyclo[4.4.0.1.^{2,6}1. ^{7,10}] dodec-8-ene-3-carboxylate.

28.(new) The composition of claim 16, where the cyclo olefin is a norbornene derivative.

29.(new) The composition of claim 16, where the cyclo olefin monomer is selected from t-butyl norbornene carboxylate (BNC), hydroxyethyl norbornene carboxylate (HNC), norbornene carboxylic acid(NC), t-butyl tetracyclo[4.4.0.1.^{2,6}1. ^{7,10}] dodec-8-ene-3-carboxylate, and t-butoxycarbonylmethyl tetracyclo[4.4.0.1.^{2,6}1. ^{7,10}] dodec-8-ene-3-carboxylate.